

XTO Energy - Western Div. (NM, CO, UT)

LaPlata County (NAD83)

Penrose 3-08H 2/23/2015

Penrose 3-08H

Penrose 3-08H Lower Lateral

Plan: Penrose 3-08H Lower Lat

Standard Planning Report

11 March, 2015

XTO Energy, Inc.

Planning Report

Database:	LMRKPROD	Local Co-ordinate Reference:	Site Penrose 3-08H 2/23/2015
Company:	XTO Energy - Western Div. (NM, CO, UT)	TVD Reference:	WELL @ 6404.00ft (Original Well Elev)
Project:	LaPlata County (NAD83)	MD Reference:	WELL @ 6404.00ft (Original Well Elev)
Site:	Penrose 3-08H 2/23/2015	North Reference:	True
Well:	Penrose 3-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Penrose 3-08H Lower Lateral		
Design:	Penrose 3-08H Lower Lat		

Project	LaPlata County (NAD83), LaPlata County, Colorado, Directional Fruitland Coal Wells		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Southern Zone		

Site	Penrose 3-08H 2/23/2015		
Site Position:		Northing:	1,137,544.88 usft
From:	Lat/Long	Easting:	2,407,507.39 usft
Position Uncertainty:	0.00 ft	Slot Radius:	0 "
		Latitude:	37° 1' 36.228000 N
		Longitude:	107° 31' 46.704000 W
		Grid Convergence:	-1.24 °

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
2,725.00	45.00	71.72	2,515.48	220.85	668.70	0.00	0.00	0.00	0.00	
2,740.00	46.74	70.35	2,525.92	224.35	678.88	13.33	11.60	-9.15	-30.00	
2,745.00	46.74	70.35	2,529.35	225.58	682.31	0.00	0.00	0.00	0.00	
3,242.77	89.95	1.59	2,729.26	588.14	890.21	15.00	8.68	-13.81	-75.12	
6,365.84	89.95	1.59	2,732.00	3,710.00	977.00	0.00	0.00	0.00	0.00	AJ Penrose 3-08H Lo

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Wellbore:	Penrose 3-08H Lower Lateral		
Design:	Penrose 3-08H Lower Lat		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	2.40	71.72	1,099.98	0.52	1.58	0.91	2.40	2.40	0.00
1,200.00	5.40	71.72	1,199.73	2.65	8.03	4.61	3.00	3.00	0.00
1,300.00	8.40	71.72	1,299.00	6.42	19.43	11.15	3.00	3.00	0.00
1,400.00	11.40	71.72	1,397.50	11.81	35.75	20.52	3.00	3.00	0.00
1,500.00	14.40	71.72	1,494.97	18.80	56.94	32.68	3.00	3.00	0.00
1,600.00	17.40	71.72	1,591.13	27.39	82.94	47.61	3.00	3.00	0.00
1,700.00	20.40	71.72	1,685.73	37.55	113.69	65.26	3.00	3.00	0.00
1,800.00	23.40	71.72	1,778.51	49.24	149.09	85.59	3.00	3.00	0.00
1,900.00	26.40	71.72	1,869.21	62.44	189.06	108.53	3.00	3.00	0.00
2,000.00	29.40	71.72	1,957.58	77.11	233.48	134.03	3.00	3.00	0.00
2,100.00	32.40	71.72	2,043.38	93.21	282.23	162.01	3.00	3.00	0.00
2,200.00	35.40	71.72	2,126.38	110.70	335.18	192.41	3.00	3.00	0.00
2,300.00	38.40	71.72	2,206.34	129.53	392.18	225.13	3.00	3.00	0.00
2,400.00	41.40	71.72	2,283.05	149.64	453.07	260.08	3.00	3.00	0.00
2,500.00	44.40	71.72	2,356.31	170.98	517.70	297.18	3.00	3.00	0.00
2,600.00	45.00	71.72	2,427.09	193.13	584.77	335.68	0.60	0.60	0.00
2,700.00	45.00	71.72	2,497.80	215.31	651.91	374.23	0.00	0.00	0.00
2,725.00	45.00	71.72	2,515.48	220.85	668.70	383.86	0.00	0.00	0.00
2,740.00	46.74	70.35	2,525.92	224.35	678.88	389.84	13.33	11.60	-9.15
2,745.00	46.74	70.35	2,529.35	225.58	682.31	391.90	0.00	0.00	0.00
2,800.00	49.35	59.82	2,566.17	242.83	719.27	418.00	15.00	4.75	-19.15
2,900.00	56.23	43.03	2,626.88	292.57	780.78	481.76	15.00	6.88	-16.79
3,000.00	65.01	29.04	2,676.07	362.98	831.43	562.75	15.00	8.78	-13.99
3,100.00	74.92	17.03	2,710.40	449.26	867.78	655.43	15.00	9.91	-12.01
3,200.00	85.40	6.12	2,727.52	545.52	887.34	753.51	15.00	10.48	-10.91
3,242.77	89.95	1.59	2,729.26	588.14	890.21	795.45	15.00	10.64	-10.58
3,300.00	89.95	1.59	2,729.31	645.35	891.80	851.18	0.00	0.00	0.00
3,400.00	89.95	1.59	2,729.39	745.31	894.58	948.55	0.00	0.00	0.00
3,500.00	89.95	1.59	2,729.48	845.27	897.36	1,045.92	0.00	0.00	0.00
3,600.00	89.95	1.59	2,729.57	945.23	900.14	1,143.30	0.00	0.00	0.00
3,700.00	89.95	1.59	2,729.66	1,045.19	902.92	1,240.67	0.00	0.00	0.00
3,800.00	89.95	1.59	2,729.75	1,145.15	905.70	1,338.04	0.00	0.00	0.00
3,900.00	89.95	1.59	2,729.83	1,245.12	908.47	1,435.42	0.00	0.00	0.00
4,000.00	89.95	1.59	2,729.92	1,345.08	911.25	1,532.79	0.00	0.00	0.00
4,100.00	89.95	1.59	2,730.01	1,445.04	914.03	1,630.16	0.00	0.00	0.00
4,200.00	89.95	1.59	2,730.10	1,545.00	916.81	1,727.54	0.00	0.00	0.00
4,300.00	89.95	1.59	2,730.19	1,644.96	919.59	1,824.91	0.00	0.00	0.00
4,400.00	89.95	1.59	2,730.27	1,744.92	922.37	1,922.28	0.00	0.00	0.00
4,500.00	89.95	1.59	2,730.36	1,844.88	925.15	2,019.66	0.00	0.00	0.00
4,600.00	89.95	1.59	2,730.45	1,944.85	927.93	2,117.03	0.00	0.00	0.00
4,700.00	89.95	1.59	2,730.54	2,044.81	930.71	2,214.40	0.00	0.00	0.00

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Well:	Penrose 3-08H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Penrose 3-08H Lower Lateral		
Design:	Penrose 3-08H Lower Lat		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,800.00	89.95	1.59	2,730.62	2,144.77	933.49	2,311.78	0.00	0.00	0.00	
4,900.00	89.95	1.59	2,730.71	2,244.73	936.26	2,409.15	0.00	0.00	0.00	
5,000.00	89.95	1.59	2,730.80	2,344.69	939.04	2,506.52	0.00	0.00	0.00	
5,100.00	89.95	1.59	2,730.89	2,444.65	941.82	2,603.90	0.00	0.00	0.00	
5,200.00	89.95	1.59	2,730.98	2,544.61	944.60	2,701.27	0.00	0.00	0.00	
5,300.00	89.95	1.59	2,731.06	2,644.57	947.38	2,798.64	0.00	0.00	0.00	
5,400.00	89.95	1.59	2,731.15	2,744.54	950.16	2,896.02	0.00	0.00	0.00	
5,500.00	89.95	1.59	2,731.24	2,844.50	952.94	2,993.39	0.00	0.00	0.00	
5,600.00	89.95	1.59	2,731.33	2,944.46	955.72	3,090.76	0.00	0.00	0.00	
5,700.00	89.95	1.59	2,731.42	3,044.42	958.50	3,188.14	0.00	0.00	0.00	
5,800.00	89.95	1.59	2,731.50	3,144.38	961.28	3,285.51	0.00	0.00	0.00	
5,900.00	89.95	1.59	2,731.59	3,244.34	964.05	3,382.88	0.00	0.00	0.00	
6,000.00	89.95	1.59	2,731.68	3,344.30	966.83	3,480.26	0.00	0.00	0.00	
6,100.00	89.95	1.59	2,731.77	3,444.27	969.61	3,577.63	0.00	0.00	0.00	
6,200.00	89.95	1.59	2,731.85	3,544.23	972.39	3,675.00	0.00	0.00	0.00	
6,300.00	89.95	1.59	2,731.94	3,644.19	975.17	3,772.38	0.00	0.00	0.00	
6,365.84	89.95	1.59	2,732.00	3,710.00	977.00	3,836.49	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
AJ Penrose 3-08H Lowe	0.00	358.76	2,732.00	3,710.00	977.00	1,141,232.77	2,408,564.76	37° 2' 12.908255 N	107° 31' 34.654829 W	
- plan hits target center										
- Point										

Casing Points							Casing Diameter (")	Hole Diameter (")
Measured Depth (ft)	Vertical Depth (ft)	Name						
225.00	225.00	9 5/8"					9-5/8	9-5/8



La Plata County (NAD83)
XTO Energy
Western Division
Penrose 3-08H

